

us-09-001-737-8.rag

Page 1

OM protein - protein search, using sw model

1815.540 Million cell updates/sec

Sequence: 1 MAKEIKFSADARAAMVRGVD.....TPAPAMPAGMDPGMMGMC 545

Searched: 908470 seqs, 133250620 residues

Maximum DB seq length: 20000000000

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Post-processing: Minimum Match 0%
                  Maximum Match 100%
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22	/SID2/gcgdata/geneseq/geneseqp-emb1/AA2001.DAT*
23	/SID2/gcgdata/geneseq/geneseqp-emb1/AA2002.DAT*

Pred. NO. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	2663	100.0	545	20	AAV23904	Streptococcus pyogenes
2	2643	99.2	545	32	ABR28526	Streptococcus pyogenes
3	2405.5	90.3	540	32	ABR28528	Streptococcus pyogenes
4	2358	88.5	541	20	AA129002	Streptococcus pneumoniae
5	2358	88.5	541	22	AA531619	Amino acid sequence
6	2347	88.1	540	22	AA501101	CPE 104 protein sequence
7	2192.5	82.1	542	23	ABR54521	Lactococcus lactis
8	2033.5	76.4	542	23	ABR54521	Lactococcus lactis
9	2026.5	76.1	544	20	AAV23905	Amino acid sequence
10	1904.5	71.5	545	20	AAV23930	Consensus amino acid

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1	5	15	25	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	235	245	255	265	275	285	295	305	315	325	335	345	355	365	375	385	395	405	415	425	435	445	455	465	475	485	495	505	515	525	535	545	555	565	575	585	595	605	615	625	635	645	655	665	675	685	695	705	715	725	735	745	755	765	775	785	795	805	815	825	835	845	855	865	875	885	895	905	915	925	935	945	955	965	975	985	995
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ALIGNMENTS

2

RESULT 1
AAV23904
ID AAV23904 standard; Protein; 545 AA
XX

AC MAY23904;

DT 22-SEP-1999 (first entry)
xx

Streptococcus pyogenes heat shock protein (Hsp) 60-2.

KM Heat shock protein; Hsp60-2; immune response; immunologic carrier
KW cancer control; tumour; sarcoma; cancer; gene therapy.
XX

OS Streptococcus pyogenes
yy

PN W09935270-A1
YY

PD 15-JUL-1999

PF 29-DEC-1998; 98WO-CA01203.

PR 31-DEC-1997; 97US-0001737.

PA (STRE-) STRESSGEN BIOTECHNOLOGIES CORP
xx

PI Mizen L, Wisniewski J;
xy

DR WPI; 1999-430397/36

XX
DT Nov 1964

PT useful in vaccine

PT agents and for d:

XX PS Claim 11: Fig 4A-B; 176bp; English.

XX CC The present sequence represents a heat shock protein, designated Hsp60-2.

CC CC The protein, its fragments, variants and fusion proteins, are

CC CC used to elicit or enhance an immune response against Streptococcus,

CC CC and to elicit a similar response to a target antigen fused to the

CC CC protein. Unlike other immunological carriers, Hsp60 proteins are not

CC CC immunosuppressive so provide an increased response to any conjugated or

CC CC fused antigen. Also, where used for cancer control, they lack the side

CC CC effects associated with endotoxins. They can also be used to detect

CC CC specific antibodies and in treatment or prevention of tumours

CC CC (e.g. sarcoma or cancers of breast, ovary, prostate, lung, pancreas or

CC CC liver). The Hsp60 polynucleotide is used for recombinant production

CC CC of the protein, as a source of primers and probes for detecting

CC CC streptococci in standard hybridization/amplification assays, and

CC CC therapeutically in gene therapy vectors.

XX SQ Sequence 545 AA:

Query Match 100.0%; Score 2663; DB 20; Length 545;

Best Local Similarity 100.0%; Pred. No. 6,9e-164;

Matches 545; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MAKEIKFSADARAARVGVMDLADTVKTLGPKGRNVYLEKAFSGPLITNDGVTIAKEIE 60

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DB 61 LEDHEFNMGAKIVSEVASKINDIAGDGTATATVLTQAIYHEGLKNTAGANPIGIRGIE 120

OY 121 TATATAVEALKAIAPVSGKEAIAQVAAVSSRSKVEYISEAMERGVNDGVTITEESRG 180

DB 121 TATATAVEALKAIAPVSGKEAIAQVAAVSSRSKVEYISEAMERGVNDGVTITEESRG 180

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DB 181 METELEVEVGKQFDRCGYLSQIYVNTDNEKNVADLENPFLITDKKVSNIODILPLEEYVK 240

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DB 241 TNRPLLIADVDGALPTVLNKRIGTFENVAAKAFGSGDRKAMLEDAIILTGTVIT 300

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DB 301 EDLLELEKDATMTALGQAKITVDKDSYIVESGSGSEAIANRIALIKSOLETTTSDPDR 360

OY 361 EKLOERLAKIAGGAVIKVCAPTETALKEMKLRIEDALNAATAVEGCIYAGGTAITTV 420

DB 361 EKLOERLAKIAGGAVIKVCAPTETALKEMKLRIEDALNAATAVEGCIYAGGTAITTV 420

OY 421 IEKVAALIEGDDATGRNIVLRALIEPPROIALAGYEGSVIIDKLNSPAGTGENAATG 480

DB 421 IEKVAALIEGDDATGRNIVLRALIEPPROIALAGYEGSVIIDKLNSPAGTGENAATG 480

OY 481 EMDVMITGTIDPVKVTBSALQNAASVASLITTEAVVANKPEPATPAPMPAGMDPGKM 540

DB 481 EMDVMITGTIDPVKVTBSALQNAASVASLITTEAVVANKPEPATPAPMPAGMDPGKM 540

OY 541 GKGCG 545

DB 541 GKGCG 545

RESULT 2

ABP28529

ID ABP28529 standard: Protein; 545 AA.

XX AC ABP28529;

XX AC

DT 02-JUL-2002 (first entry)

XX

DE Streptococcus polypeptide SEQ ID NO 6234.

XX KW Streptococcus; GAS; CBS; group B streptococcus; Streptococcus agalactiae;

XX KW group A streptococcus; Streptococcus pyogenes; antibacterial;

XX KW antiinflammatory; infection; vaccine; meningitis; gene therapy.

OS Streptococcus pyogenes.

PN W0200234771-A2.

PD 02-MAY-2002.

XX PF 29-OCT-2001; 2001MO-GB04789.

XX PR 27-OCT-2000; 2000GB-0026333.

XX PR 24-NOV-2000; 2000GB-0028727.

XX PR 07-MAR-2001; 2001GB-0005640.

XX PA (CHIR-) CHIRON SPA.

XX PA (GENO-) INST GENOMIC RES.

XX PI Telford J, Maignant V, Margarit Ros YI, Grandi G, Fraser C;

XX PI Telford J,

XX DR WPI: 2002-352536/38.

XX DR N-PSDB; ABN69160.

PT New Streptococcus protein for the treatment or prevention of infection

PT or disease caused by Streptococcus bacteria, such as meningitis, and

PT for detecting a compound that binds to the protein.

XX Claim 1: Page 3786; 4525bp; English.

XX The invention relates to a protein (ABP25413-ABP30895) from group B

CC streptococcus/GAS (Streptococcus agalactiae) or group A streptococcus/GAS

CC (Streptococcus pyogenes), comprising one of 5483 sequences (S1), given in

CC the specification. The proteins have antibacterial and antiinflammatory

CC activity. (1), nucleic acids encoding (1), ABN6044-ABN71526 and

CC antibodies that bind (1) are used in the manufacture of medicaments for

CC the treatment or prevention of infection or disease caused by

CC Streptococcus bacteria, particularly S. agalactiae and S. pyogenes.

CC Nucleic acids encoding (1) are used to detect Streptococcus in a

CC biological sample. (1) is used to determine whether a compound binds to

CC (1). A composition comprising (1) or a nucleic acid encoding (1), may be

CC used as a vaccine or diagnostic composition. The disease caused by

CC streptococcus that is prevented or treated may be meningitis. Nucleic

CC acid encoding (1) may be used to recombinantly produce (1) and may be

CC used in gene therapy. Antibodies to (1) are used for affinity

CC chromatography, immunoassays, and distinguishing/identifying

CC Streptococcus proteins.

XX SQ Sequence 545 AA:

Query Match 99.2%; Score 2643; DB 23; Length 545;

Best Local Similarity 99.8%; Pred. No. 1.4e-162;

Matches 541; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

OY 1 MAKEIKFSADARAARVGVMDLADTVKTLGPKGRNVYLEKAFSGPLITNDGVTIAKEIE 60

DB 3 MAKDIKFSADARAARVGVMDLADTVKTLGPKGRNVYLEKAFSGPLITNDGVTIAKEIE 62

OY 61 LEDHEFNMGAKIVSEVASKINDIAGDGTATATVLTQAIYHEGLKNTAGANPIGIRGIE 120

DB 63 LEDHEFNMGAKIVSEVASKINDIAGDGTATATVLTQAIYHEGLKNTAGANPIGIRGIE 122

OY 121 TATATAVEALKAIAPVSGKEAIAQVAAVSSRSKVEYISEAMERGVNDGVTITEESRG 180

DB 123 TATATAVEALKAIAPVSGKEAIAQVAAVSSRSKVEYISEAMERGVNDGVTITEESRG 182

OY 181 METELEVEVGKQFDRCGYLSQIYVNTDNEKNVADLENPFLITDKKVSNIODILPLEEYVK 240

DB 183 METELEVEVGKQFDRCGYLSQIYVNTDNEKNVADLENPFLITDKKVSNIODILPLEEYVK 242

QY 241 TNRPLLIADVDGDEALPTLVNKRIGTFNVVAVKAPFGDREKAMLEDAITLGTGVTI 300
DB 243 TNRPLLIADVDGDEALPTLVNKRIGTFNVVAVKAPFGDREKAMLEDAITLGTGVTI 302
QY 301 EDLGELEKDAFTALGOAKITVDKSTYIVGSSSSALANRIALIKSOLETTSDPDR 360
DB 303 EDLGELEKDAFTALGOAKITVDKSTYIVGSSSSALANRIALIKSOLETTSDPDR 362
QY 361 EKLOERLAKLAGVAVIKVAPFTALKEKRLIEDALNTRAAVEGIVAGGCTALITV 420
DB 363 EKLOERLAKLAGVAVIKVAPFTALKEKRLIEDALNTRAAVEGIVAGGCTALITV 422
QY 421 IEKVALELEGGDDATGRNIVLRALEEPVQIALNAGYEGSVIDKLKNSPAGTGFNAATG 480
DB 423 IEKVALELEGGDDATGRNIVLRALEEPVQIALNAGYEGSVIDKLKNSPAGTGFNAATG 482
QY 481 EWDVMKTGIIIDPVKVTRSALONASVASLITTEAVYANKPEPATPAPAMPAGMDPGM 540
DB 483 EWDVMKTGIIIDPVKVTRSALONASVASLITTEAVYANKPEPATPAPAMPAGMDPGM 542
QY 541 GG 542
DB 543 GG 544

RESULT 3

ABP28528 ID ABP28528 standard: Protein: 540 AA.

AC ABP28528:
DT 02-JUL-2002 (first entry)
DE Streptococcus polypeptide SEQ ID NO 6232.
XX
KM Streptococcus: GAS; group B streptococcus; Streptococcus agalactiae;
KW group A streptococcus; Streptococcus pyogenes; antibacterial;
XX antinflammatory; infection; vaccine; meningitis; gene therapy.
OS Streptococcus agalactiae.
XX
PN MO200234771-A2.
PD 02-MAY-2002.
XX
PF 29-OCT-2001; 2001WO-GB04789.
XX
PR 27-OCT-2000; 2000GB-0026333.
PR 24-NOV-2000; 2000GB-0028727.
PR 07-MAR-2001; 2001GB-0005640.
XX
PA (CHIR-) CHIRON SPA.
PA (GENO-) INST GENOMIC RES.
XX
PI Telford J, Masignani V, Margarit Ros YI, Grandi G, Fraser C;
PI Tettelin H;
XX
DR MPI; 2002-352536/38.
DR N-PSDB; ABN69159.
XX
PT New Streptococcus protein for the treatment or prevention of infection
PT or disease caused by Streptococcus bacteria, such as meningitis, and
PT for detecting a compound that binds to the protein.
XX
PS Claim 1; Page 3785; 4525pp; English.
XX
CC The invention relates to a protein (ABP2413-ABP30895) from group B
CC streptococcus/GAS (Streptococcus agalactiae) or group A streptococcus/GAS
CC (Streptococcus pyogenes), comprising one of 5483 sequences (SI), given in
CC the specification. The proteins have antibacterial and anti-inflammatory
CC activity. (I), nucleic acids encoding (I), ABN6044-ABN71526 and
CC antibodies that bind (I) are used in the manufacture of medicaments for
CC the treatment or prevention of infection or disease caused by

CC Streptococcus bacteria, particularly S. agalactiae and S. pyogenes.
CC Nucleic acids encoding (I) are used to detect Streptococcus in a
CC biological sample. (I) is used to determine whether a compound binds to
CC (I). A composition comprising (I) or a nucleic acid encoding (I), may be
CC used as a vaccine or diagnostic composition. The disease caused by
CC streptococcus that is prevented or treated may be meningitis. Nucleic
CC acid encoding (I) may be used to recombinantly produce (I) and may be
CC used in gene therapy. Antibodies to (I) are used for affinity
CC chromatography, immunoassays, and distinguishing/identifying
CC Streptococcus proteins.
XX
SQ Sequence 540 AA:
1

Query Match 90.3%; Score 2405.5; DB 23; Length 540;
Best Local Similarity 90.2%; Pred. No. 2,9e-147;
Matches 489; Conservative 25; Mismatches 23; Indels 3; Gaps 2;

QY 1 MAKEIFESADAAAVAGDMLADTVKTLGPGRRNVLEKAFSPPLITNDGVITAKEIE 60
DB 1 MAKDIFESADAAVAGDMLADTVKTLGPGRRNVLEKAFSPPLITNDGVITAKEIE 60
QY 61 LEDHFNMGAKIVSEVASKTNDIAGDGTATVLTQAVHGLKNVTAGANPIGIRGIE 120
DB 61 LEDHFNMGAKIVSEVASKTNDIAGDGTATVLTQAVHGLKNVTAGANPIGIRGIE 120
QY 121 TATATVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERYGNDGVITIEESRG 180
DB 121 TATATVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERYGNDGVITIEESRG 180
QY 181 METELEVEGQMPDGRGYLSQYVVTNENKVADELNPFILITDKKVSINDIIPLEEVK 240
DB 181 METELEVEGQMPDGRGYLSQYVVTNENKVADELNPFILITDKKVSINDIIPLEEVK 240
QY 241 TNRPLLIADVDGDEALPTLVNKRIGTFNVVAVKAPFGDREKAMLEDAITLGTGVTI 300
DB 241 TNRPLLIADVDGDEALPTLVNKRIGTFNVVAVKAPFGDREKAMLEDAITLGTGVTI 300
QY 301 EDLGELEKDAFTALGOAKITVDKSTYIVGSSSSALANRIALIKSOLETTSDPDR 360
DB 301 EDLGELEKDAFTALGOAKITVDKSTYIVGSSSSALANRIALIKSOLETTSDPDR 360
QY 361 EKLOERLAKLAGVAVIKVAPFTALKEKRLIEDALNTRAAVEGIVAGGCTALITV 420
DB 361 EKLOERLAKLAGVAVIKVAPFTALKEKRLIEDALNTRAAVEGIVAGGCTALITV 420
QY 421 IEKVALELEGGDDATGRNIVLRALEEPVQIALNAGYEGSVIDKLKNSPAGTGFNAATG 480
DB 421 IEKVALELEGGDDATGRNIVLRALEEPVQIALNAGYEGSVIDKLKNSPAGTGFNAATG 480
QY 481 EWDVMKTGIIIDPVKVTRSALONASVASLITTEAVYANKPEPATPAPAMPAGMDPGM 540
DB 481 EWDVMKTGIIIDPVKVTRSALONASVASLITTEAVYANKPEPATPAPAMPAGMDPGM 540
QY 541 GG 542
DB 538 GG 539

RESULT 4

AAY23902 ID AAY23902 standard: Protein: 541 AA.

AC AAY23902:
DT 22-SEP-1999 (first entry)
DE Streptococcus pneumoniae heat shock protein (Hsp)60-2.
XX
KW Heat shock protein: Hsp60-2; immune response; immunological carrier;
XX cancer control; tumour; sarcoma; cancer; gene therapy.
OS Streptococcus pneumoniae.

PN MO935270-A1.
 XX 15-JUL-1999.
 XX 29-DEC-1998; 98WO-CA01203.
 XX 31-DEC-1997; 97US-0001737.
 XX (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.
 PA Mizzzen L, Mianlewska J;
 PI WPI: 1999-430397/36;
 DR N-PSDB: AAK86153.
 XX New nucleic acid encoding heat shock protein-60 from Streptococcus,
 PT useful in vaccines, as carriers for other immunogens, as anticancer
 PT agents and for diagnosis
 XX Claim 11: Fig 2A-B; 176pp; English.
 PS
 XX The present sequence represents a heat shock protein, designated Hsp60-2.
 CC The protein, its fragments, variants and fusion proteins, are
 CC used to elicit or enhance an immune response against Streptococcus,
 CC and to elicit a similar response to a target antigen fused to the
 CC protein. Unlike other immunological carriers, Hsp60 proteins are not
 CC immunosuppressive so provide an increased response to any conjugated or
 CC fused antigen. Also, where used for cancer control, they lack the side
 CC effects associated with endotoxins. They can also be used to detect
 CC specific antibodies and in treatment or prevention of tumors
 CC (e.g. sarcoma or cancers of breast, ovary, prostate, lung, pancreas or
 CC liver). The Hsp60 polynucleotide is used for recombinant production
 CC of the protein, as a source of primers and probes for detecting
 CC streptococci in standard hybridization/amplification assays, and
 CC therapeutically in gene therapy vectors.
 XX
 XX Sequence 541 AA:
 SQ
 Query Match 88.5%; Score 2358; DB 20; Length 541;
 Best Local Similarity 87.9%; Pred. No. 3,3e-144;
 Matches 479; Conservative 33; Mismatches 29; Indels 4; Gaps 1;

QY 481 EWDYDKITGIDIPKVTYSALONASVASLITTEAVYANKPEPATPAPAPAGDEGKM 540
 DB 481 EWDYDKITGIDIPKVTYSALONASVASLITTEAVYANKPEPATPAPAPAGDEGKM 536
 QY 541 GGMG 545
 DB 537 GGMG 541
 RESULT 5
 AAB31619
 ID AAB31619 standard; Protein: 641 AA.
 XX
 XX AAB31619;
 AC
 DT 30-APR-2001 (first entry)
 XX
 DE Amino acid sequence of Hsp65-E7 fusion protein.
 XX
 KW Heat shock protein: Hsp; Th1 response; Th1 cell; CD4+ T lymphocyte cell;
 KW lymphocyte; Hsp65; Hsp40; Hsp10; Hsp60; Hsp71; microbial pathogen;
 KW E7 protein.
 XX
 OS Synthetic.
 OS Streptococcus pneumoniae.
 OS Human papillomavirus.
 XX
 PN WO200104344-A2.
 XX
 PD 18-JAN-2001.
 PF 10-JUL-2000; 2000WO-US18828.
 XX
 PR 08-JUL-1999; 99US-0143757.
 XX
 XX (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.
 XX Siegel M, Chu NR, Mizzzen LA;
 PI WPI: 2001-138361/14;
 DR N-PSDB: AAF25036.
 PT Screening for compounds that stimulate Th1-like responses in CD4+ T
 PT lymphocyte cells
 XX
 XX Example 15; Fig 15A-B; 88pp; English.
 XX
 CC The present sequence represents a fusion protein comprising a
 CC Streptococcus pneumoniae heat shock protein (Hsp) 65 fused to a HPV16 E7
 CC protein. The fusion protein is used in the method of the invention. The
 CC specification describes a method of determining whether a compound
 CC stimulates a Th1-like response. Th1 cells are a subset of CD4+
 CC T lymphocyte cells. The method comprises contacting naive lymphocytes
 CC in vitro with a fusion protein comprising at least a fragment of Hsp,
 CC and then detecting the Th1-like response exhibited by the cell sample.
 CC The proteins which may be used in the method of the invention are Hsp65,
 CC Hsp40, Hsp10, Hsp60, and Hsp71. The method may be used to identify
 CC compounds that stimulate Th1-like responses in response to microbial
 CC pathogens.
 XX
 SQ Sequence 641 AA:
 Query Match 88.5%; Score 2358; DB 22; Length 641;
 Best Local Similarity 87.9%; Pred. No. 4.1e-144;
 Matches 479; Conservative 33; Mismatches 29; Indels 4; Gaps 1;

61 LEHFENMGAKLSEVASKTNDIAGDGTATATVLTQALVREGIKNTAGANPDRIGRIG 120
121 TATATVAVALKAIAPVSGKEALIAOVAVSSSEKVEGYISEMERVAGDGYITTESRG 180
122 TAVAAVAVALKNNIVYANKENIAQVAAVSSSEKVEGYISEMERVAGDGYITTESRG 180
181 METELEVEGMOQFDRGYLSQVWVTDNKKRADLENPFLITDKKVSNIODILPLEEYVK 240
181 METELEVEGMOQFDRGYLSQVWVTDNKKRADLENPFLITDKKVSNIODILPLEEYVK 240
241 TNRPLLIADVDGEALPTVLNKRIGTFENVAVAKPGFDRRRKAMLEDIALITGTVIT 300
241 SNRPLLIADVDGEALPTVLNKRIGTFENVAVAKPGFDRRRKAMLEDIALITGTVIT 300
301 EDLGLKDATMTALGOAAKITVDKSTVVEGSSSEATIANRIALIKSOLETTSPDR 360
301 EDLGLKDATMTALGOAAKITVDKSTVVEGSSSEATIANRIALIKSOLETTSPDR 360
361 EKLOERLAKLAGVAVIKYGAFTETALKEMKLRIDALNTPRAAVEGIVAGGTTALITV 420
361 EKLOERLAKLAGVAVIKYGAFTETALKEMKLRIDALNTPRAAVEGIVAGGTTALITV 420
421 IEXVALELEGDDATGNIVLRALEEPYQIALNAGIEGSSVIDKKSPPAGTGFNAATG 480
421 IEXVALELEGDDATGNIVLRALEEPYQIALNAGIEGSSVIDKKSPPAGTGFNAATG 480
481 EYWDKIKTGIIDPVKVTNSALONAAVASLITTEAVVANKPEPATPAPAMPAGMDPGM 540
481 EYWDKIKTGIIDPVKVTNSALONAAVASLITTEAVVANKPEPATPAPAMPAGMDPGM 540
541 GGMG 545
537 GGMG 541
RESULT 6
ID AAM01101 standard: Protein: 540 AA.
AC AAM01101:
DF 02-OCT-2001 (first entry)
DE CFE 104 protein sequence.
KM Antibacterial; vaccine; gene therapy; bacterial cell wall viability;
KM CFE; CEG; conserved essential gene; bacterial infection;
KM antisense therapy; antibiotic resistance.
OS Streptococcus pneumoniae.
PN WO200149721-A2.
PD 12-JUL-2001.
PF 29-DEC-2000; 2000MO-US35604.
PR 30-DEC-1999; 99US-0174089.
XX (BRIM) BRISTOL-MYERS SQUIBB CO.
PI Dougherty TJ, Pucci M, Dougherty BA, Davison DB, Bruccoleri RE;
PI Thanassi JA;
XX HPI: 2001-486721/54.
XX N-PSDB: AAH90800.
XX Nucleic acids encoding conserved essential genes involved in bacterial
XX replication which are potential targets for the treatment of antibiotic
XX resistant bacterial infections -
XX Clalm 27: Pages 356-358; 380pp: English.
XX

CC The present invention relates to nucleic acids (AAH90701-AAH90918)
CC encoding polypeptides (AAM01002-AAM01114), which are essential for the
CC viability of a bacterial cell wall. The acronym CFE stands for "CEG For
CC Expression", where CEG stands for "Conserved Essential Gene". The nucleic
CC acids are useful for detecting the presence of proteins essential for the
CC viability of a bacterial cell wall in samples such as cells, tissues,
CC biological fluids, blood, serum, nose, ear or throat swabs with ligands,
CC and for detecting corresponding target nucleic acid molecules with
CC complementary sequences. The nucleic acids are also useful for
CC determining whether a genomic nucleotide sequence of interest is
CC essential for viability of a bacterial cell or whether it resides within
CC an operon, by integrating an exogenous nucleotide sequence comprising a
CC portion of an open reading frame of the genomic sequence of interest
CC (comprising 200-500 base pairs) into the genomic sequence of interest
CC which confers a selectable phenotype to the cell, and determining cell
CC viability with a selection agent such as chloramphenicol. The nucleic
CC acids and proteins are also useful as vaccines and for treating bacterial
CC infections with gene therapy and antisense therapy. The nucleic acids
CC also enable identification of targets suitable for the treatment of
CC antibiotic resistant bacterial infections.
XX
SQ Sequence 540 AA:
Query Match 88.1%; Score 2347; DB 22; Length 540;
Best Local Similarity 87.8%; Pred. No. 1.7e-143;
Matches 477; Conservative 34; Mismatches 28; Indels 4; Gaps 1;
1 MAKEIFESADRAAMVAGVDMLADTVKVTGPRGRNVLEKARFSPITNDGVTIAEIE 60
1 MSKEIFSSDARSAMVAGVDILADTVKVTGPRGRNVLEKARFSPITNDGVTIAEIE 60
61 LEHFENMGAKLSEVASKTNDIAGDGTATATVLTQALVREGIKNTAGANPDRIGRIG 120
61 LEHFENMGAKLSEVASKTNDIAGDGTATATVLTQALVREGIKNTAGANPDRIGRIG 120
121 TATATVAVALKAIAPVSGKEALIAOVAVSSSEKVEGYISEMERVAGDGYITTESRG 180
121 TATATVAVALKAIAPVSGKEALIAOVAVSSSEKVEGYISEMERVAGDGYITTESRG 180
121 TAVAAVAVALKNNIVYANKENIAQVAAVSSSEKVEGYISEMERVAGDGYITTESRG 180
181 METELEVEGMOQFDRGYLSQVWVTDNKKRADLENPFLITDKKVSNIODILPLEEYVK 240
181 METELEVEGMOQFDRGYLSQVWVTDNKKRADLENPFLITDKKVSNIODILPLEEYVK 240
181 METELEVEGMOQFDRGYLSQVWVTDNKKRADLENPFLITDKKVSNIODILPLEEYVK 240
241 TNRPLLIADVDGEALPTVLNKRIGTFENVAVAKPGFDRRRKAMLEDIALITGTVIT 300
241 SNRPLLIADVDGEALPTVLNKRIGTFENVAVAKPGFDRRRKAMLEDIALITGTVIT 300
301 EDLGLKDATMTALGOAAKITVDKSTVVEGSSSEATIANRIALIKSOLETTSPDR 360
301 EDLGLKDATMTALGOAAKITVDKSTVVEGSSSEATIANRIALIKSOLETTSPDR 360
361 EKLOERLAKLAGVAVIKYGAFTETALKEMKLRIDALNTPRAAVEGIVAGGTTALITV 420
361 EKLOERLAKLAGVAVIKYGAFTETALKEMKLRIDALNTPRAAVEGIVAGGTTALITV 420
421 IEXVALELEGDDATGNIVLRALEEPYQIALNAGIEGSSVIDKKSPPAGTGFNAATG 480
421 IEXVALELEGDDATGNIVLRALEEPYQIALNAGIEGSSVIDKKSPPAGTGFNAATG 480
421 IEXVALELEGDDATGNIVLRALEEPYQIALNAGIEGSSVIDKKSPPAGTGFNAATG 480
481 EYWDKIKTGIIDPVKVTNSALONAAVASLITTEAVVANKPEPATPAPAMPAGMDPGM 540
481 EYWDKIKTGIIDPVKVTNSALONAAVASLITTEAVVANKPEPATPAPAMPAGMDPGM 540
541 GGM 543
537 GGM 539
RESULT 7
ID ABB53701 standard: Protein: 542 AA.
AC ABB53701:
XX

XX	DT	16-MAY-2002	(first entry)
XX	DE	Lactococcus lactis protein groEL.	
XX	KW	Biosynthesis; biodegradation; lactic bacterium; yogurt; cheese.	
OS	XX	Lactococcus lactis IL1403.	
PX	FR	FR2807446-A1.	
XX	DB	12-OCT-2001.	
XX	FE	11-APR-2000; 2000FR-0004630.	
PR	XX	11-APR-2000; 2000FR-0004630.	
PA	(INRG) INRA INST NAT RECH AGRONOMIQUE.		
PI	Biotline A., Sorokine A., Renault P., Ehrlich SD;		
DR	WPI, 2002-043418/06.		
PT	New nucleotide sequence useful in the identification or Lactococcus		
PT	lactis and related species -		
XX	Claim 6; SEQ ID No 403; 2504bp; French.		
PS	XX		
XX	The present invention is related to a Lactococcus lactis nucleotide		
CC	sequence (ABA0521) and related proteins (AB853300-AB855623). The		
CC	nucleic acid sequence is useful in the detection and/or amplification of		
CC	nucleic acid sequence, particularly to identify Lactococcus lactis or		
CC	related species. The proteins of the invention are useful for the		
CC	biosynthesis or biodegradation of a composition of interest. The		
CC	invention helps research in lactic bacteria, particularly useful in the		
CC	production of yogurt and cheese.		
CC	Note: The sequence data for this patent is based on equivalent patent		
CC	WO20017734 (published 18-OCT-2001) which is available in electronic		
CC	format directly from WIPO at ftp.wipo.int/pub/published_pcl_sequences .		
XX	Sequence 542 AA:		
Query Match	82.4%; Score 2195.5; DB 23; Length 542;		
Best Local Similarity	81.1%; Pred. No. 1e-133;		
Matches 442; Conservative 57; Mismatches 46; Indels 5; Gaps 3			
OY	1 MAKEIFSDARRAAMRVGYDLADTVKVTLLGPKGRNVLEKAFSGSLINDGVIAKEIE 60		
DB	1 MSNDIFFSSDRTAMRGIDILADVTKITLPGKRNVVLEKSYSPLTINDGVIAKEIE 60		
OY	61 LEHFENMGALVEVAASRTNDIAGGTTATVTOAIYHEGLKYANTAGANPIGIRGIE 120		
DB	61 LEHFENMGALVEVAASRTNDIAGGTTATVTOAIYHEGLKYANTAGANPVGIRGIE 120		
OY	121 TATFTEVELKAIKQPVSKSEKAIQVAANSSRSKEGEYSFAEMERNGDVITRESRG 180		
DB	121 LAATFVASISEKAIIVPHRKSAIQAVAVSSRSKEGEYSDFAMERNGSDVITRESKG 180		
OY	181 MEETLEEVGEGQFDREGTLYSOYWTVDNEKKVAVDLENPFILITDKKVSVIDIIPLEEVLK 240		
DB	181 HOTELEVVGEGQFDREGTLYSOYWTVDNEKKVAVDLENPFILITDKKSINIDEILPLLEGILK 240		
OY	241 TNRRLLIIVADDVGEALPTLVLNKINGTFNNVAAKPGGGRRAKMEEDIALTGCVYT 300		
DB	241 TNRRLLIIVADDVGEALPTLVLNKINGTFNNVAAKPGGGRRAKMEEDIALTLGCVIT 300		
OY	301 EDGLEIDMARTALGAOKATTUDKTSYTYVEGSGSEMIANRIALKLSOLETTSDPFR 360		
DB	301 EELGDLDKARTELELGQAARKAVDKHITTYVEGSGSNDISRAVLIIRKQIEKTSTDPFR 360		
OY	361 EKIQERTLKLAGGVAVIKVGPATELAEKRLIEDALNATRPAVEEIGIVAGGTALTIV 420		
DB	361 EKIQERTLKLAGGVAVIKVGPATELAEKRLIELDALNAIRAVEEIGIVAGGTALVANA 420		

QY	421	IEVVALEIEGDATRNIVRALEPVOIALAAGYESVYIDKLNSPACTGPNAT	480
Db	421	IAALDLSEEDDIQTGINIVRALEPVOIALAAGYESVYIDKLNSPACTGPNAT	480
QY	481	EWMDIKKGIIDPVKVTSAALONASVSLITTEVAANKREPATAPAMPAGDCGM	540
Db	481	QWNIIEGSIYDPAKVTSAALONASVSLITTEVAANKREPA--APAMP--MDPSM	536
QY	541	GGMG 545	
Db	537	GGMG 540	
RESULT 8			
ID	ABB49241		
ID	ABB49241	standard; Protein: 542 AA.	
AC	ABB49241:		
DT	05-FEB-2002	(first entry)	
XX			
DE		Listeria monocytogenes protein #1945.	
XX			
KM		Antibacterial: gene therapy: vaccine: biosynthesis; biodegradation;	
KM		vitamin B12; bacterial infection; disease.	
XX			
OS		Listeria monocytogenes.	
PN			
PN	WO200177353-A2.		
PD	18-OCT-2001.		
PF	11-APR-2001: 2001WO-FR01118.		
PR	11-APR-2000: 2000FR-0004629.		
PA		(INSP) INST PASTEUR.	
PI	Buchrieser C, Frangoul L, Couve E, Rusniok C, Faini H, Dehoux P;		
PI	Dussutget O, Clercuan F, Nedjati H, Glasier P, Kunst F, Cozzari P;		
PI	Daniels J, Goebel W, Kretz J, Kunz M, Ng E, Vazquez-Boland JA;		
PI	Domiguez-Bernal G, Garrido-Garcia P, Tierrez-Martinez A, Amant A;		
PI	Chakraborty T, Dommann E, Hain T, Berche P, Charbit A, Durant L;		
PI	Perez-Diaz J, Baquero F, Garcia Del Portillo F, Gomez-Lopez N;		
PI	Madueno E, de Pablos B, Weiland J, Keerst U, Entlan K, Hauf J;		
PI	Rose M, Voss H.		
DR	WPI: 2002-010914/01.		
XX			
XX		Genomic sequence for Listeria monocytogenes, useful e.g. for treatment	
PT		and prevention of Listeria and related bacterial infections, and	
PT		related polypeptides	
PS	Claim 6: SEQ ID NO 1946; 192pp; French.		
XX			
CC		The present invention relates to the genome sequence of Listeria	
CC		monocytogenes ED-6 (see AB003041). The genome sequence and fragments of	
CC		it are useful for selecting probes and primers for detecting genes in L.	
CC		monocytogenes and related organisms, and for studying genetic	
CC		polymorphisms and other genomes. The present sequence is a protein	
CC		encoded by the genome sequence of the present invention. Proteins	
CC		expressed from the genome sequence are useful for raising specific	
CC		antibodies. Identification of L. monocytogenes and related organisms, and	
CC		for biosynthesis and biodegradation, especially biosynthesis of Vitamin	
CC		B12. The genome sequence and proteins encoded by it are also useful for	
CC		selecting compounds that regulate gene expression and cell replication	
CC		and modulate L. monocytogenes-related diseases. In addition, the genome	
CC		sequence and proteins encoded by it are useful in pharmaceutical and	
CC		vaccine compositions for the treatment or prevention of infections by L.	
CC		monocytogenes and related organisms.	
CC		Note: The sequence data for this patent did not form part of the printed	
CC		specification, but was obtained in electronic format directly from WPI	

CC at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ Sequence 542 AA:

Query Match 76.4% Score 2033.5 DB 23 Length 542;
Best Local Similarity 75.6% Pred. No. 2.3e-123
Matches 412; Conservative 61; Mismatches 67; Indels 5; Gaps 3;

QY 1 MAKEIKSADARAARVGVMDLADYVTLGPKGRNVLEKAGSPILITNDGYIAKEIE 60
DB 1 MAKDIKSEDAARRAKLKGVDOLNAKAVKVLGPKGRNVLEKAGSPILITNDGYIAKEIE 60
QY 61 LEDHEFNNGAKLVSEVASKTNDIAGDGTATVTLQAIHVEGLKNTAGANPIGIRGIE 120
DB 61 LEDPEFNNGAKLVSEVASKTNDVAGDGTATVTLQAIHVEGLKNTAGANPVGVRGIE 120
QY 121 TATATAVEALKAIAQVSGKEAIAQVAASVSRSEKVEYISEAMERVNDGVITIEESRG 180
DB 121 KAVATAIEELKAIKSPIESKESIAQVAALSSGDEVGKLAEMERVNDGVITIEESRG 180
QY 181 METELEVEGMOFDRGYLSQVYTDNEKNVADLNPILITDKKYSNIODITPLEEVIX 240
DB 181 FATELDVSEGMQFDRGYTSPTMTDSKNEAVLEKPYILITDKKINNIOELFVLDQVYQ 240
QY 241 TNRPLITADVDGEALPTVLNKGITFNVAANKAGGDRKAMLEDIALLTGCTVT 300
DB 241 QGRPLIADVEDGEAQLTLNKLKGTFTNVAANKAGGDRKAMLEDIALLTGCTVT 300
QY 301 EDGLLEKDATMTALGOAKITVDKSTVIVSGSSSEALANRIALIKSOLETTTSDPR 360
DB 301 EDGLLEKDATMTALGOAKITVDKSTVIVSGSSSEALANRIALIKSOLETTTSDPR 360
QY 361 EKDIERLAKLAGVAVVYVGAATETELKERRIEDALNSTRAVEEGIVAGGCTALVSI 420
DB 361 EKDIERLAKLAGVAVVYVGAATETELKERRIEDALNSTRAVEEGIVAGGCTALVSI 420
QY 421 IEKVALELEGDDATGRNIVLRALEEPYROIALNAGVEGVIDLKSPAGCPMAANG 480
DB 421 YNKVAALAEAGDVGRTGNIYLRSLSEEPYROIANHAGLEGSIVYELKHEAVGCFMAANG 480
QY 481 EWDVMIKTGIIIDPVYTRSALONAAVSALITTEAVVANKPEPAPAPACMPGCM 540
DB 481 EWDVMIKTGIIIDPVYTRSALONAAVSALITTEAVVANKPEPAPAPACMPGCM 540
QY 541 GGMGG 545
DB 536 GGMGG 540

RESULT 9
AAI23905
ID AAI23905 standard; Protein: 544 AA.
XX
AC AAI23905;
XX
DT 22-SEP-1999 (first entry)
XX
DE Amino acid sequence of a heat shock protein.
XX
KW Heat shock protein; Hsp; immune response; immunological carrier;
XX
KW cancer control; tumour; sarcoma; cancer; gene therapy.
XX
OS Bacillus subtilis.
XX
PN MO9935270-A1.
XX
PD 15-JUL-1999.
XX
PF 29-DEC-1998; 98MO-CA01203.
XX
PR 31-DEC-1997; 97US-0001737.
XX
PA (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.

XX
F1 Mitten L, Wisniewski J;
XX
XX WPI: 1999-430397/36.
XX
XX New nucleic acid encoding heat shock protein-60 from Streptococcus,
XX
XX useful in vaccines, as carriers for other immunogens, as anticancer
XX
XX agents and for diagnosis
XX
XX
XX Disclosure: Fig 10A-E; 176pp; English.

CC AAI23905-30 represent heat shock proteins (Hsps). The specification
CC describes Streptococcal Hsps, designated Hsp60. These proteins, their
CC fragments, variants and fusion proteins, are used to elicit or enhance
CC an immune response against Streptococcus, and to elicit a similar
CC response to a target antigen fused to the protein. Unlike other
CC immunological carriers, Hsp60 proteins are not immunosuppressive so
CC provide an increased response to any conjugated or fused antigen. Also,
CC where used for cancer control, they lack the side effects associated
CC with endotoxins. They can also be used to detect specific antibodies
CC and in treatment or prevention of tumours (e.g. sarcoma or cancers of
CC breast, ovary, prostate, lung, pancreas or liver). The Hsp60
CC polynucleotide is used for recombinant production of the protein, as
CC a source of primers and probes for detecting streptococci in standard
CC hybridization/amplification assays, and therapeutically in gene
CC therapy vectors.
XX
XX

Sequence 544 AA:

Query Match 76.1% Score 2026.5 DB 20 Length 544;
Best Local Similarity 73.8% Pred. No. 8.3e-123
Matches 402; Conservative 69; Mismatches 71; Indels 3; Gaps 1;

QY 1 MAKEIKSADARAARVGVMDLADYVTLGPKGRNVLEKAGSPILITNDGYIAKEIE 60
DB 1 MAKEIKSEDAARRAKLKGVDALADYVTLGPKGRNVLEKAGSPILITNDGYIAKEIE 60
QY 61 LEDHEFNNGAKLVSEVASKTNDIAGDGTATVTLQAIHVEGLKNTAGANPIGIRGIE 120
DB 61 LEDHEFNNGAKLVSEVASKTNDVAGDGTATVTLQAIHVEGLKNTAGANPVGVRGIE 120
QY 121 TATATAVEALKAIAQVSGKEAIAQVAASVSRSEKVEYISEAMERVNDGVITIEESRG 180
DB 121 QAVAAVAIENLEKISPIESKESIAQVAALSSGDEVGSLAEMERVNDGVITIEESRG 180
QY 181 METELEVEGMOFDRGYLSQVYTDNEKNVADLNPILITDKKYSNIODITPLEEVIX 240
DB 181 FTELEVEGMOFDRGYASPYMTDSKNEAVLDPYILITDKKINNIOELFVLDQVYQ 240
QY 241 TNRPLITADVDGEALPTVLNKGITFNVAANKAGGDRKAMLEDIALLTGCTVT 300
DB 241 QGRPLIADVEDGEALTLNKLKGTFTNVAANKAGGDRKAMLEDIALLTGCTVT 300
QY 301 EDGLLEKDATMTALGOAKITVDKSTVIVSGSSSEALANRIALIKSOLETTTSDPR 360
DB 301 EDGLLEKDATMTALGOAKITVDKSTVIVSGSSSEALANRIALIKSOLETTTSDPR 360
QY 361 EKDIERLAKLAGVAVVYVGAATETELKERRIEDALNSTRAVEEGIVAGGCTALVY 420
DB 361 EKDIERLAKLAGVAVVYVGAATETELKERRIEDALNSTRAVEEGIVAGGCTALVY 420
QY 421 IEKVALELEGDDATGRNIVLRALEEPYROIALNAGVEGVIDLKSPAGCPMAANG 480
DB 421 YNKVAALAEAGDVGRTGNIYLRSLSEEPYROIANHAGLEGSIVYELKHEAVGCFMAANG 480
QY 481 EWDVMIKTGIIIDPVYTRSALONAAVSALITTEAVVANKPEPAPAPACMPGCM 540
DB 481 EWDVMIKTGIIIDPVYTRSALONAAVSALITTEAVVANKPEPAPAPACMPGCM 540
QY 541 GGMGG 545
DB 538 GGMGG 542

RESULT 10
AAI23930
ID AAI23930 standard; Protein; 545 AA.
XX
AC AAI23930:
XX
DT 22-SEP-1999 (first entry)
XX
DE Consensus mino acid sequence of a heat shock protein.
XX
KW Heat shock protein; Hsp; immune response; immunological carrier;
KW cancer control; tumour; sarcoma; cancer; gene therapy.
XX
OS Synthetic.
XX
PN MO9935270-A1.
XX
PD 15-JUL-1999.
XX
PF 29-DEC-1998; 98WC-CA01203.
XX
PR 31-DEC-1997; 97US-0001737.
XX
PM (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.
XX
PI Miszen L, Misniewski J;
XX
DR WPI: 1999-430397/36.
XX
PT New nucleic acid encoding heat shock protein-60 from Streptococcus,
PT useful in vaccines, as carriers for other immunogens, as anticancer
PT agents and for diagnosis
XX
PS Disclosure: Fig 10A-E; 176pp; English.
XX
CC AAI23905-30 represent heat shock proteins (Hsps). The specification
CC describes Streptococcal Hsps, designated Hsp60. These proteins, their
CC fragments, variants and fusion proteins, are used to elicit or enhance
CC an immune response against Streptococcus, and to elicit a similar
CC response to a target antigen fused to the protein. Unlike other
CC immunological carriers, Hsp60 proteins are not immunosuppressive so
CC provide an increased response to any conjugated or fused antigen. Also,
CC where used for cancer control, they lack the side effects associated
CC with endotoxins. They can also be used to detect specific antibodies of
CC breast, ovary, prostate, lung, pancreas or liver). The Hsp60
CC polynucleotide is used for recombinant production of the protein, as
CC a source of primers and probes for detecting streptococci in standard
CC hybridization/amplification assays, and therapeutically in gene
CC therapy vectors.
XX
SQ Sequence 545 AA:
Query Match 71.5%; Score 1904.5; DB 20; Length 545;
Best Local Similarity 71.7%; Pred. No. 6.3e-115;
Matches 392; Conservative 66; Mismatches 80; Indels 9; Gaps 6;
OY 1 MAKEITFADRAAAMVGVDMADTVTKVTLGGKGNVTEKARGSPITNNGVYIAKEIE 60
DB 1 MAKDKIFEEERARRMARGNALADAVVTLGGKGNVTEKARGSPITNNGVYIAKEIE 60
OY 61 LEDHEENNGAKLYSEVASKTNDIGDCTTATVYLOAIVHEGLKANTYGANPIGIRGIE 120
DB 61 LEDHEENNGAKLYSEVASKTNDIGDCTTATVYLOAIVHEGLKANTYGANPIGIRGIE 120
OY 121 TATATAVEALKAIAPOVSCKEAIAQVAASR-SEKVGGEYSFAMERVANGCVITEESR 179
DB 121 KAVDAVVEELKAIAKPVETKEIEIAQVATISANGDEBIGELIADAEKVKXGCVITEESR 180
OY 180 GMELELEVESGQFGRGYLSQYVTDHREKMAVDENPFILITDKKXVNIODIIPLEEVY 239
DB 181 TLETELEVESGQFGRGYLSQYVTDHREKMAVDENPFILITDKKXVNIODIIPLEEVY 240

OY 240 KTRNPLLIADVDGEALPTVLNKIRGTFFNVAVKAPGFGRRKMEIATITGGTVI 299
DB 241 QAKGRPLLIADVDGEALPTVLNKIRGTFFNVAVKAPGFGRRKMEIATITGGTVI 300
OY 300 TEDGELKXPAITAGAKITVDSDVTEGSSSEANRRLAKLSQLETTSDPD 359
DB 301 SEELGELBENATIEDLGAKKVVYTDOTTYDAGDA-ALNGRAOIRSOLESTSDPD 359
OY 360 REKIQENLAKGVAIVKAGAPETALKENKRIEDALNATRAAVEGIVAGGTALIT 419
DB 360 REKIQENLAKGVAIVKAGAPETALKENKRIEDALNATRAAVEGIVAGGTALIT 419
OY 420 VIEKVALELE-GDDATGRNIVRALPEEVRQIALNAGEGVSVIDLKNSPAGTFENNA 478
DB 420 AAPALDKLTENGDEATGVNIVRALPEEVRQIALNAGEGVSVIDLKNSPAGTFENNA 478
OY 479 TGEVYDMIKTGIIDPVKVTSAIONASVASLITTEAVVANKPEPATPAPAPACMDPG 538
DB 479 TGEVYDMIAAGIIDPTKVTSAIONASVASLITTEAVVANKPEPATPAPAPACMDPG 538
OY 539 MMGGMG 545
DB 534 MMGGMG 540
RESULT 11
AAG81848
ID AAG81848 standard; Protein; 539 AA.
XX
AC AAG81848:
XX
DT 03-SEP-2001 (first entry)
XX
DE S. epidermidis open reading frame protein sequence SEQ ID NO: 790.
XX
KW Staphylococcus epidermidis SRI strain; infection; diagnosis;
KW vaccination; endocarditis.
XX
OS Staphylococcus epidermidis.
XX
PN WO200134809-A2.
XX
PD 17-MAY-2001.
XX
PF 09-NOV-2000; 2000WO-US30782.
XX
PR 09-NOV-1999; 99US-0164258.
XX
PM (GLAX) GLAXO GROUP LTD.
XX
PI Kimmerly NJ;
XX
DR WPI: 2001-316495/33.
DR N-PSDB: AAH52698.
PT Nucleic acids encoding polypeptides from Staphylococcus epidermidis,
PT useful for vaccinating against infections, e.g. endocarditis -
XX
PS Claim 18; Page 243; 2189pp; English.
XX
CC AAI23904 to AAI23970 represent nucleic acids (I) encoding polypeptides
CC (II), given in AAG81454 to AAG81320, from Staphylococcus epidermidis.
CC (II) and (II) can have antibacterial activity and therefore can be used
CC in vaccination. The nucleic acids (I) may be used to produce the
CC S. epidermidis polypeptides (II) via the production of vectors
CC containing them which are used to produce hosts cells which express the
CC polypeptides. The polypeptides (II) (and/or nucleic acids) may then be
CC used to vaccinate subjects and to raise antibodies against the bacteria.
CC The polypeptides may also be used to assay for other inhibitors of their
CC activity and therefore identify compounds that may be used for the
CC treatment of S. epidermidis infections, e.g. endocarditis. AAI23971 to
CC AAI23990 represent specifically claimed S. epidermidis genomic DNA


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Db      537 GMM 539
|||||
RESULT 13
ABP39860
ID      ABP39860 standard; Protein: 540 AA.
XX
AC      ABP39860;
XX
XX      24-JUL-2002 (first entry)
XX
DE      Staphylococcus epidermidis ORF amino acid sequence SEQ ID NO:4705.
XX
XX      Staphylococcus epidermidis, open reading frame; ORF: bacterial infection;
XX      antibacterial; gene therapy.
XX
OS      Staphylococcus epidermidis.
XX
XX      US6380370-B1.
XX
XX      30-APR-2002.
XX
XX      13-AUG-1998; 98US-0134001.
XX
XX      14-AUG-1997; 97US-055779P.
XX      08-NOV-1997; 97US-064964P.
XX
XX      (GENO-) GENOME THERAPEUTICS CORP.
XX
PI      Doucette-Stamm LA, Bush D;
XX
DR      WPI: 2002-381255/41.
XX      N-PSDB: ABN92405.
XX
XX      Novel isolated nucleic acid encoding a Staphylococcus epidermidis
XX      polypeptide, useful for diagnosing and treating bacterial infections -
XX      Disclosure: SEQ ID 4705; 267bp; English.
XX
XX
CC      ABN90538 to ABN93374 represent Staphylococcus epidermidis open reading
CC      frame (ORF) nucleic acid sequences which encode the amino acid sequences
CC      given in ABP3124 to ABP37960. The S. epidermidis sequences have
CC      antibacterial activity and can be used in gene therapy. The sequences
CC      can also be used in the diagnosis and treatment of bacterial infections,
CC      particularly S. epidermidis infections. The sequences can be used to
CC      screen for compounds able to interfere with the S. epidermidis life
CC      cycle or inhibit S. epidermidis infection
CC      N.B. The sequence data for this patent did not form part of the printed
CC      specification, but was obtained in electronic format directly from the
CC      USPTO web site.
XX
XX
SQ      Sequence 540 AA;
Query Match 68.9%; Score 1833.5; DB 23; Length 540;
Best Local Similarity 66.5%; Pred. No. 2,4e-110;
Matches 359; Conservative 87; Mismatches 93; Indels 1; Gaps 1;

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OY      241 TNRPLTIADVDVGEALPTLVNKRIGTFENVAVKAPGFGDRRKAMLEDAITLGGTGT 300
|||
Db      242 ASRPILLVADEVESDALTNVLRKRGFTAVAKAPGDRRKAMLEDAITLGGTGT 301
OY      301 EDGLKELKATATLALGAAKITVDKDSVIVIEGSGSEAMNRLALIKSOLETTSDPR 360
|||
Db      302 DDLGLEKDSALDMITANKVEVYTDHTTVVDSNGDENNDARVQILAEITDSERDK 361
OY      361 EKLOERLAKLACGAVIKGAPETRLAKEMKLIEDALNATRAVBSGIYAGGATLTV 420
Db      362 EKTESLGLTPGVAVVQVWVGSETELEKERTIEDLNSTRAVBSGIYAGGATLTVNI 421
OY      421 IEKVALELESGDATGRNIVLRALEPVROIALNAGYEGSVYIDKLNSPAGTGFMAATG 480
Db      422 YOKVSEIKAGDGVETGVNIYKALQAPVROIAENAGIEGSIIVERTLKHAGVGFMAATN 481
OY      481 EVDKMTKTIIDPVVTRSRALQNAASVASLITTEAVVANKPEPATPAPMPAGMDPGM 540
Db      482 EVMNMLEGIVDPTVTRSRALQNAASVAMFLTTEAVVASIPEPENNDOPGMGM-PCGM 540

RESULT 14
AAV23906
ID      AAV23906 standard; Protein: 539 AA.
XX
XX      AAV23906;
XX
XX      22-SEP-1999 (first entry)
XX
XX      Amino acid sequence of a heat shock protein.
XX
DE      Heat shock protein; Hsp; Immune response; Immunological carrier;
XX      cancer control; tumour; sarcoma; cancer; gene therapy.
XX
XX      Clostridium sp.
XX
XX      WO9935270-A1.
XX
XX      15-JUL-1999.
XX
XX      29-DEC-1998; 98WO-CA01203.
XX
XX      31-DEC-1997; 97US-0001737.
XX
XX      (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.
XX
PI      Mizen L, Wisniewski J;
XX
DR      WPI: 1999-430397/36.
XX
XX      New nucleic acid encoding heat shock protein-60 from Streptococcus,
XX      useful in vaccines, as carriers for other immunogens, as anticancer
XX      agents and for diagnosis
XX
XX      Disclosure: Fig 10A-E; 176bp; English.
XX
XX
CC      AAV23905-30 represent heat shock proteins (Hsps). The specification
CC      describes Streptococcal Hsps, designated Hsp60. These proteins, their
CC      fragments, variants and fusion proteins, are used to elicit or enhance
CC      an immune response against Streptococcus, and to elicit a similar
CC      response to a target antigen fused to the protein. Unlike other
CC      immunological carriers, Hsp60 proteins are not immunosuppressive so
CC      provide an increased response to any conjugated or fused antigen. Also,
CC      where used for cancer control, they lack the side effects associated
CC      with endotoxins. They can also be used to detect specific antibodies
CC      and in treatment or prevention of tumours (e.g. sarcoma or cancers of
CC      breast, ovary, prostate, lung, pancreas or liver). The Hsp60
CC      polynucleotide is used for recombinant production of the protein, as
CC      a source of primers and probes for detecting streptococcal in standard
CC      hybridization/amplification assays, and therapeutically in gene
CC      therapy vectors.
XX

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SQ Sequence 539 AA:

Query Match 68.3%; Score 1819; DB 20; Length 539;

Best Local Similarity 67.7%; Pred. No. 26-109; Mismatches 92; Indels 6; Gaps 2;

Matches 367; Conservative 77; Mismatches 92; Indels 6; Gaps 2;

QY 1 MAKEIFSDAARAAVRGYDMLADTVKVTIGPRGRNVLEKARFSPILINDGVTAKEIE 60
 DB 1 MAKTLLFSEARSRMAGVCKLANTVKTIGPRGRNVLEKARFSPILINDGVTAKEIE 60
 QY 61 LEDHEFNMGATLVSEVASKTNDIAGDGTATVLTQATVHEGLKNTYAGANPFIGIRGIE 120
 DB 61 LEDAYENMGATLVSEVASKTNDIAGDGTATVLTQATVHEGLKNTYAGANPFIGIRGIE 120
 QY 121 TATATAVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERVGNVGVITTEESRG 180
 DB 121 TATATAVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERVGNVGVITTEESRG 180
 QY 181 METELEVEVGNQFDRGYLSQVWYTDNENKAVADLENPFLITDKKVSNIODILPLEEVK 240
 DB 181 MGTELDVEVGNQFDRGYLSQVWYTDNENKAVADLENPFLITDKKVSNIODILPLEEVK 240
 QY 241 TNRPLLIITADVDGALPTLVNKRIGTFENYAVAPGFGRRKAMLEDAITLTCGVIT 300
 DB 241 AGKKLLIITADVDGALPTLVNKRIGTFENYAVAPGFGRRKAMLEDAITLTCGVIT 300
 QY 301 EDGLLELDATMTALGOAKITVOKDSTVYEGSSSSALANRLALIKSULETTTSDFDR 360
 DB 301 DEVGGLLELDATMTALGOAKITVOKDSTVYEGSSSSALANRLALIKSULETTTSDFDR 360
 QY 361 EKLOERLAKIAGVAVIKVAPETALKEKRLIEDALNATRAVEEGIVAGGCTALITY 420
 DB 361 EKLOERLAKIAGVAVIKVAPETALKEKRLIEDALNATRAVEEGIVAGGCTALITY 420
 QY 421 IEKVAALELE-GDDATGRNIVLRALPEPVROIALNAGVSGSVYIDILKNSPAGTGMAT 479
 DB 421 INEVAKLISIDODEGYINIVRSLEPNRQIAHNAAGLEGSVILEKVKNSDAGVGFALR 480
 QY 480 GEMVDMITGIIDPVYKTRSAIONAASVASLITTEAVANKPEPATPAPAMPAGNDPCH 539
 DB 481 GEYKDMIKAGIVDPYKTRSAIONAASVASLITTEAVANKPEPATPAPAMPAGNDPCH 539
 QY 540 GGM 541
 DB 536 DG 537

RESULT 15

AAI23910 ID AAI23910 standard; Protein: 541 AA.

AC AAY23910;

DF 22-SEP-1999 (first entry)

XX Amino acid sequence of a heat shock protein.

XX Heat shock protein; Hsp; immune response; immunological carrier;

XX cancer control; tumor; sarcoma; cancer; gene therapy.

XX Mycobacterium avium.

XX WO9935270-A1.

XX 15-JUL-1999.

XX 29-DEC-1998; 98WO-CA01203.

XX 31-DEC-1997; 97US-0001737.

XX (STRE-) STRESSGEN BIOTECHNOLOGIES CORP.

XX Mizzen L, Wisniewski J;

XX WPI: 1999-430397/36.
 XX New nucleic acid encoding heat shock protein-60 from Streptococcus,
 PT useful in vaccines, as carriers for other immunogens, as anticancer
 PT agents and for diagnosis
 XX Disclosure: Fig 10A-E; 176pp; English.

CC AAY3905-30 represent heat shock proteins (hsps). The specification
 CC describes Streptococcal Hsps, designated Hsp60. These proteins, their
 CC fragments, variants and fusion proteins, are used to elicit or enhance
 CC an immune response against Streptococcus, and to elicit a similar
 CC response to a target antigen fused to the protein. Unlike other
 CC immunological carriers, Hsp60 proteins are not immunosuppressive so
 CC provide an increased response to any conjugated or fused antigen. Also,
 CC where used for cancer control, they lack the side effects associated
 CC with endotoxins. They can also be used to detect specific antibodies
 CC in breast, ovary, prostate, lung, pancreas or liver). The Hsp60
 CC polynucleotide is used for recombinant production of the protein, as
 CC a source of primers and probes for detecting streptococcal in standard
 CC hybridization/amplification assays, and therapeutically in gene
 CC therapy vectors.

SQ Sequence 541 AA:

Query Match 63.9%; Score 1702; DB 20; Length 541;

Best Local Similarity 63.0%; Pred. No. 7,3e-102; Mismatches 113; Indels 4; Gaps 1;

Matches 342; Conservative 84; Mismatches 113; Indels 4; Gaps 1;

QY 1 MAKEIFSDAARAAVRGYDMLADTVKVTIGPRGRNVLEKARFSPILINDGVTAKEIE 60
 DB 1 MAKTLLFSEARSRMAGVCKLANTVKTIGPRGRNVLEKARFSPILINDGVTAKEIE 60
 QY 61 LEDHEFNMGATLVSEVASKTNDIAGDGTATVLTQATVHEGLKNTYAGANPFIGIRGIE 120
 DB 61 LEDAYENMGATLVSEVASKTNDIAGDGTATVLTQATVHEGLKNTYAGANPFIGIRGIE 120
 QY 121 TATATAVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERVGNVGVITTEESRG 180
 DB 121 TATATAVEALKAIAQPVSGKEAIAQVAASVRSSEKVEYISEAMERVGNVGVITTEESRG 180
 QY 181 METELEVEVGNQFDRGYLSQVWYTDNENKAVADLENPFLITDKKVSNIODILPLEEVK 240
 DB 181 MGTELDVEVGNQFDRGYLSQVWYTDNENKAVADLENPFLITDKKVSNIODILPLEEVK 240
 QY 241 TNRPLLIITADVDGALPTLVNKRIGTFENYAVAPGFGRRKAMLEDAITLTCGVIT 300
 DB 241 AGKKLLIITADVDGALPTLVNKRIGTFENYAVAPGFGRRKAMLEDAITLTCGVIT 300
 QY 301 EDGLLELDATMTALGOAKITVOKDSTVYEGSSSSALANRLALIKSULETTTSDFDR 360
 DB 301 DEVGGLLELDATMTALGOAKITVOKDSTVYEGSSSSALANRLALIKSULETTTSDFDR 360
 QY 361 EKLOERLAKIAGVAVIKVAPETALKEKRLIEDALNATRAVEEGIVAGGCTALITY 420
 DB 361 EKLOERLAKIAGVAVIKVAPETALKEKRLIEDALNATRAVEEGIVAGGCTALITY 420
 QY 421 IEKVAALELEGGDDATGRNIVLRALPEPVROIALNAGVSGSVYIDILKNSPAGTGMAT 480
 DB 421 INEVAKLISIDODEGYINIVRSLEPNRQIAHNAAGLEGSVILEKVKNSDAGVGFALR 480
 QY 480 GEMVDMITGIIDPVYKTRSAIONAASVASLITTEAVANKPEPATPAPAMPAGNDPCH 540
 DB 481 GEYKDMIKAGIVDPYKTRSAIONAASVASLITTEAVANKPEPATPAPAMPAGNDPCH 540
 QY 541 GGM 543
 DB 537 GGM 539

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